

SECTION 7 GUIDELINES - Snake River Basin Office
Thelypodium howellii* ssp. *spectabilis
Howell's spectacular thelypody (threatened)

I. BACKGROUND

Legal Status

Thelypodium howellii ssp. *spectabilis* (THHOS) was listed as threatened on May 26, 1999 (64 FR 28393) due to a variety of factors, including habitat destruction and fragmentation from agricultural and urban development, grazing by domestic livestock, competition from non-native vegetation, and alterations of wetland hydrology (see "Summary of Threats" section below).

Species Description

Thelypodium howellii ssp. *spectabilis* is a herbaceous biennial that grows to approximately 60 centimeters (cm) (2 feet) tall, with branches arising from near the base of the stem. The basal leaves are approximately 5 cm (2 inches (in)) long with wavy edges, and are arranged in a rosette. Stem leaves are shorter, narrow, and have smooth edges. Flowers appear in loose spikes at the ends of the stems. Flowers have four pink to purple petals approximately 1.9 cm (0.75 in) in length, each of which is borne on a short (0.6 cm (0.25 in)) stalk. Fruits are long, slender pods (Greenleaf 1980, Kagan 1986).

Population Size/Location

THHOS generally occurs in alkaline meadow habitats at approximately 1,000 meters (m) (3,000 feet (ft)) to 1,100 m (3,500 ft) elevation in northeast Oregon. The plant is known from 11 sites (5 populations) ranging in size from 0.01 hectares (ha) (0.03 acres (ac)) to 16.8 ha (41.4 ac) in the Baker-Powder River valley in Baker and Union Counties. The total occupied habitat for this species is approximately 40 ha (100 ac). One site, historically known from Malheur County (the type locality), has not been relocated since 1927 and is considered to be extirpated (Kagan 1986). The entire extant range of this taxon lies within a 21 kilometer (km) (13 mile (mi)) radius of Haines, Oregon.

Sites containing THHOS are located near the communities of North Powder, Haines, and Baker. The North Powder population contains 5 sites, the largest of which is subject to a conservation easement. The Haines plant population consists of 3 small sites located in or near the town of Haines. A site west of Baker is within a pasture adjacent to a road. Another site north of Baker exists in a small remnant of meadow habitat surrounded by farmland. One site approximately 8 kilometers (5 miles) north of North Powder is located on private land at Clover Creek (Kagan 1986, Oregon Natural Heritage Program (ONHP) 1998).

THHOS may occur in relatively moist, alkaline meadows in or adjacent to valley bottoms. THHOS plants may be found adjacent to streams or springs/seeps in some areas, or in upland

(i.e., not strictly wetland) habitat types.

Associated species may include: *Sarcobatus vermiculatus* (greasewood), *Distichlis stricta* (alkali saltgrass), *Elymus cinereus* (giant wild rye), *Spartina gracilis* (alkali cordgrass), and *Poa juncifolia* (alkali bluegrass) (Kagan 1986). The species composition varies considerably among sites. THHOS can be found in areas with numerous exotic plant species, including *Sisymbrium altissimum* (tumble mustard), *Cirsium* spp. (thistles), and *Dipsacus sylvestris* (teasel).

Soils have not been specifically studied in areas occupied by THHOS, but are thought to consist of moderately well-drained pluvial-deposited alkaline clays mixed with recent alluvial silts (Kagan 1986).

Summary of Threats

Known or potential threats to *Thelypodium howellii* ssp. *spectabilis* include:

1) Livestock grazing -

Livestock grazing during the active growing season for this plant (generally April through August) can adversely affect this species by preventing or reducing reproduction (seed set). As with other plant species, the effects of livestock grazing are dependent on the intensity and timing of grazing.

2) Agricultural and urban development -

Habitat conversion to agricultural or urban uses can destroy or modify habitat for this species.

3) Noxious weeds -

Noxious weeds can degrade habitat for THHOS. Some aggressive exotic plant species may outcompete THHOS for water, nutrients, and light. In addition, noxious weeds may crowd THHOS out of potentially suitable habitat areas.

4) Herbicide and pesticide use -

The treatment of noxious weeds via herbicide application has potential to adversely affect THHOS. Pesticides may affect pollinators of THHOS.

5) Hydrologic alterations -

Alterations of hydrology such as dams, diversions, or irrigation ditches could change habitat conditions for THHOS.

6) Habitat restoration and associated activities -

Habitat restoration activities such as fencing, creating waterfowl habitat, planting, or mowing could potentially affect THHOS.

7) Road construction and maintenance -

Road construction and maintenance activities can directly or indirectly affect habitat for THHOS.

8) Powerline or pipeline construction -

Ground-disturbing activities such as powerline or pipeline construction could also affect this species.

Consultation Requirements and Private Landowners

This section is intended to clarify effects of the listing of this species on private landowners, and to briefly summarize requirements for Federal agencies regarding *Thelypodium howellii* ssp. *spectabilis*.

Effects of Listing on Private Landowners

THHOS is currently only known to occur on private (non-Federal) lands. It is important to note that there are essentially no restrictions on the activities of private landowners who have listed plant species or habitat on their property. Unfortunately, many landowners mistakenly believe that having a listed plant¹ species on their property can keep them from making private use of their own land. In fact, landowners may face potential constraints ONLY if they need a Federal permit or receive Federal funding to conduct specific activities on their land, such as filling in wetlands. This means that landowners can engage in activities described as potential threats (see above) without restriction or penalty. However, the Service is seeking voluntary cooperation from landowners to protect this species. Such cooperation will be vital to the recovery of this species.

Federal Agency Involvement

Federal agencies that provide authorization or funding for activities on private land that may affect THHOS must consult with the Service to ensure that their activities do not adversely affect

¹The Endangered Species Act treats listed plants differently from listed animal species in some ways. The lack of protection for listed plants on private land (unless there is Federal funding or authorization) is one example of this discrepancy.

this species. Such agencies may include: the U.S. Army Corps of Engineers, Natural Resources Conservation Service, U.S. Forest Service, Bureau of Land Management, Federal Highways Administration, and the Farm Services Agency. For further information regarding Federal agency responsibilities, see the Guidelines section below.

References Cited

Greenleaf, J. 1980. Status report for Thelypodium howellii Wats ssp. spectabilis (Peck) Al-Shehbaz.

Kagan, J.S. 1986. Status report for Thelypodium howellii ssp. spectabilis. Oregon Natural Heritage Data Base, Portland, Oregon.

Oregon Natural Heritage Program. 1998. Element occurrence records for Thelypodium howellii ssp. spectabilis.

Contacts

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II. GUIDELINES - Protocol for Evaluating Project Effects

NOTE: These guidelines are specific to Federal agencies (i.e., they are not requirements for private landowners).

Ensure that any proposed or ongoing actions are consistent with these guidelines and recovery objectives. No ground-disturbing activities should be allowed within habitat occupied by this species. Actions that may alter hydrology (including but not limited to stream channelization, mining, or reservoir operation/development) should be reviewed for potential impacts to THHOS. Any activities that involve trampling or soil compaction such as recreational activities, grazing, and maintenance or construction projects should also be reviewed. (Refer to the “Summary of Threats” section for more information on activities that may affect this species.)

Surveys should be conducted during the flowering season for THHOS (i.e., when it is identifiable) in areas of known and/or potential habitat.

Survey Guidelines:

Surveys should be conducted as part of section 7 consultation in potential habitat areas for

THHOS in Baker and Union Counties. For example, habitat that has not been completely converted to agriculture from approximately 3,000 to 4,000 feet in the Baker Valley and vicinity should be considered as having high potential to contain this species.

Because THHOS can be found in very small fragments of habitat and in disturbed areas, project areas should be thoroughly surveyed for THHOS (see the Service's Rare Plant Inventory Guidelines for more information).

Surveys should be conducted for projects or activities that involve ground disturbance and for projects or activities that could potentially affect this species. Examples of such projects or activities include: stream channelization and stabilization; habitat improvement; livestock grazing; projects that impact hydrology such as dams, diversions, or wetland fill; road/highway construction and maintenance; and herbicide use.

Brief Summary of Survey Protocol:

- C Surveys should be conducted according to the Rare Plant Inventory Guidelines (attached).
- C Surveys should be conducted during the peak flowering period, generally from June to mid-July. Surveys conducted at other times of year are not reliable and should not be accepted.
- C Surveys should be conducted by walking or otherwise closely scrutinizing potential habitat looking for flowering stalks, and should be performed by trained botanists familiar with conducting rare plant inventories. Known populations range in size from less than 20 individuals to thousands of plants. Since this species is a biennial, population size and distribution can vary from year to year. Several visits during the growing season, and in consecutive years, may be advisable.
- C Any new sites should be mapped and immediately reported to the Oregon Natural Heritage Program and the U.S. Fish and Wildlife Service (Snake River Basin Office).